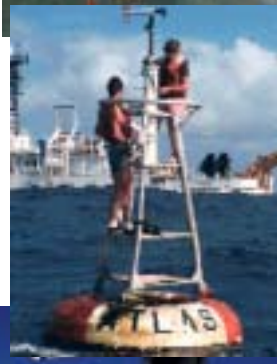
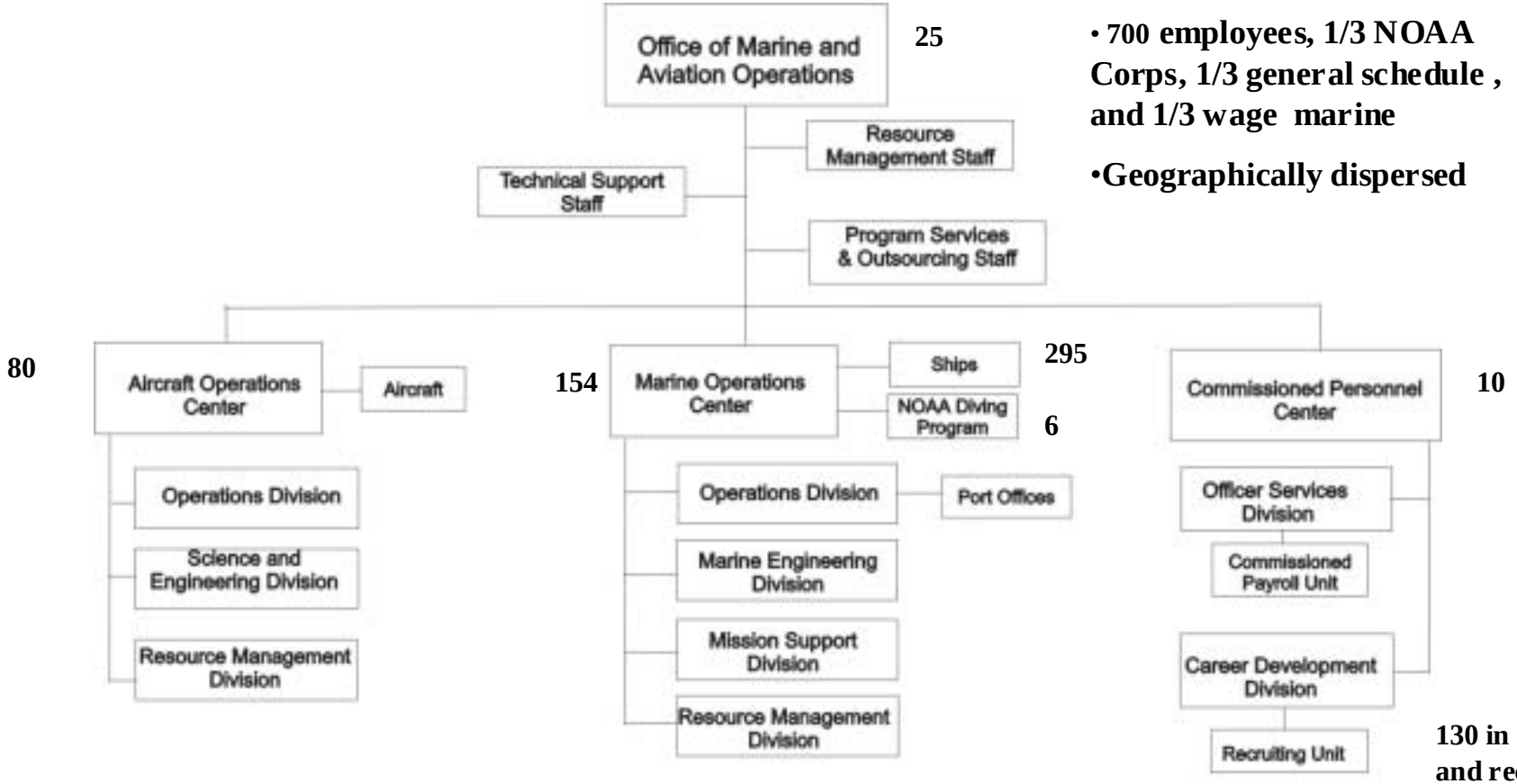
Office of Marine and Aviation Operations

The Role of NOAA Ships and Aircraft in Support of NOAA Programs



Briefing for
Heath Heikkila and Steve Meyers
April 3, 2002

OMAO Organization



- 700 employees, 1/3 NOAA Corps, 1/3 general schedule , and 1/3 wage marine
- Geographically dispersed

130 in LO/SO and recruits

What Does OMAO Provide NOAA?

- **Centralized management of:**
  - **15 Ships**
  - **13 Aircraft**
  - **Operational diving**
- **Program support with 247 Commissioned Officers**
  - **Provide operational expertise with strong foundation of engineering and scientific training**
  - **Highly mobile and flexible personnel system**
  - **Assigned and serve throughout NOAA**
- **Modern data collection platforms and media trained personnel that provide excellent public outreach and educational opportunities for DOC and NOAA**
- **Expertise for ship and aircraft charters**
- **Oversight for safety inspection and operating protocol of NOAA small craft**

Ship Home Ports

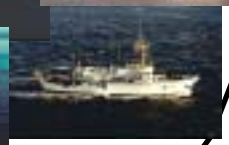
MILLER FREEMAN

RAINIER

FAIRWEATHER in 2003

ALBATROSS IV

JOHN COBB



McARTHUR

MOC SEATTLE (4)

WOODS HOLE (2)

DELAWARE II

WHITING

RUDE

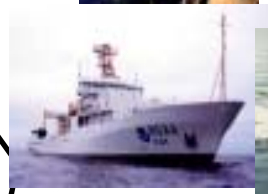
MOC NORFOLK (2)

DAVID STARR JORDAN

SAN DIEGO (1)

CHARLESTON (2)

PASCAGOULA (2)



RONALD H. BROWN

FERREL

YTT in 2004

GORDON GUNTER

OREGON II

TOWNSEND CROMWELL

(2)

KAIMIMOANA

ADVENTUROUS in 2003

MISSIONS

- Charting & Mapping
- Fisheries Research
- Oceanographic Research
- Environmental Assessment

Aircraft Bases

Minneapolis
(2)

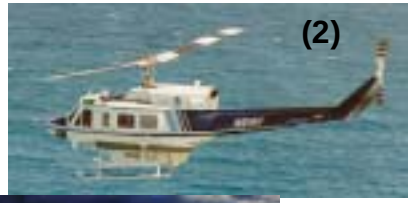
MISSIONS

Charting & Mapping
Fisheries Research
Hurricane Research
Environmental Assessment

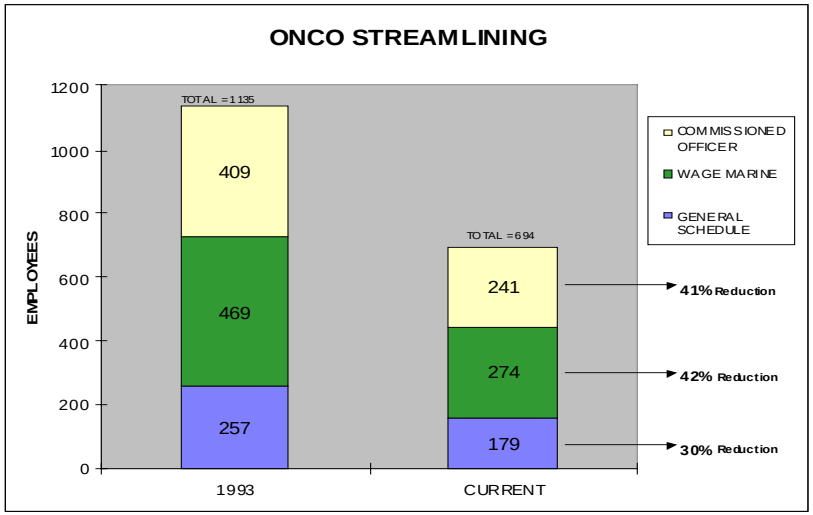
Silver Spring
(1)

Santa Barbara
(1)

AOC Tampa
(9)



OMAO changed in mid 1990's



Sea days on NOAA ships

FY1993 to FY2001

Outsourcing

10%

Now over 50%

Safety and reliability remained at high levels

Ship Funding

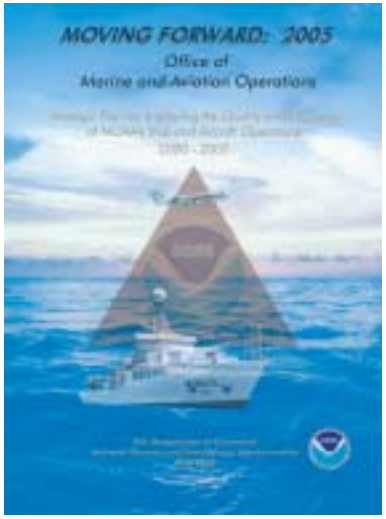
FY1993 to FY2001

Ship and Shoreside Personnel

14%*

40%

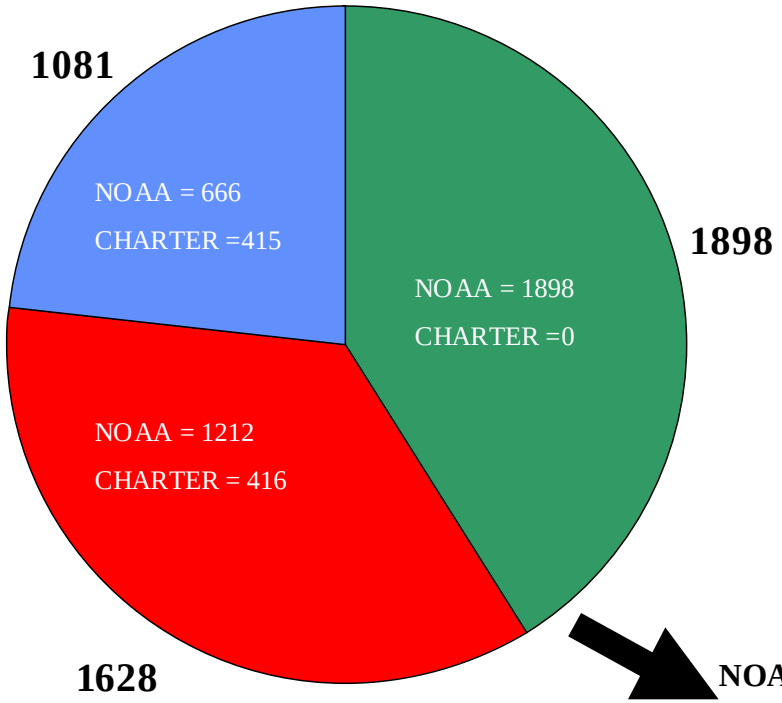
OMAO now has a 5 year strategic plan that makes cost effectiveness and high quality service priorities



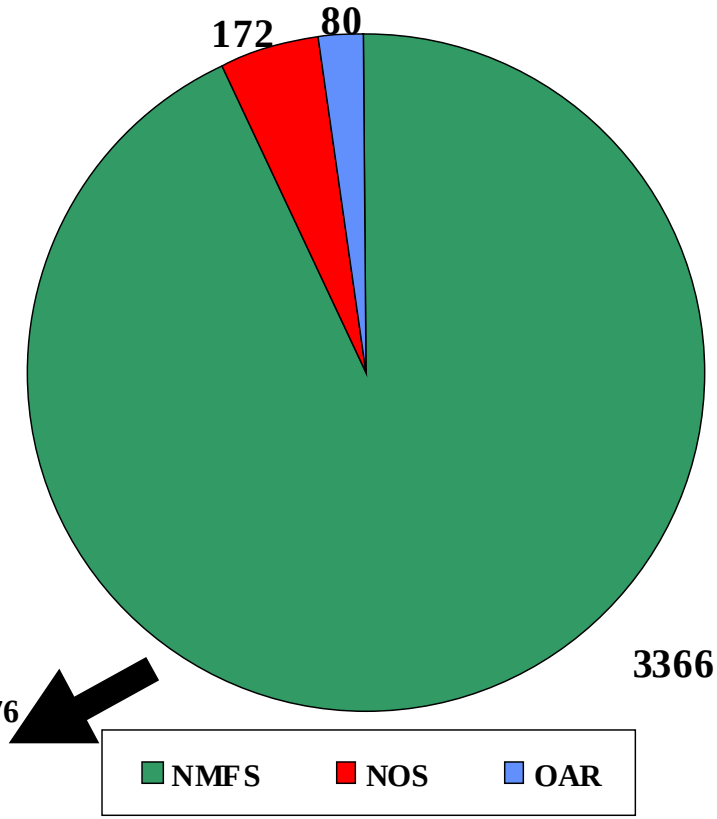
* does not include inflation

FY 2003 Planned Ship Operating Days

NOAA Fleet and Charter - *Marine Services*



NOAA Charter - *Program Dollars*



NOAA Ships - 3776

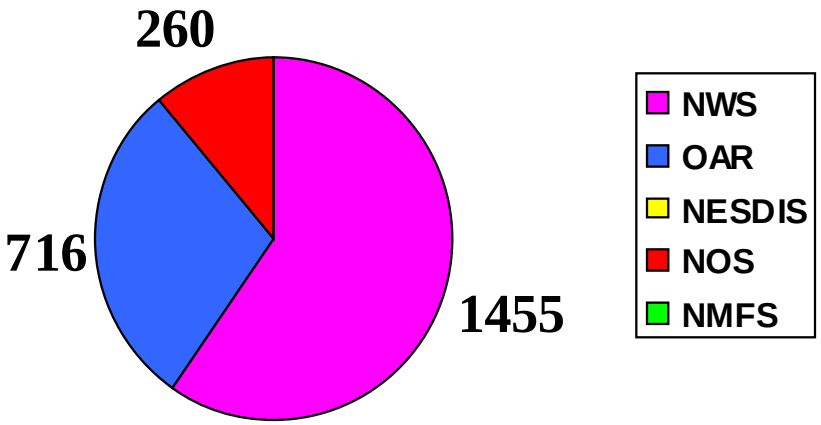
Charter - 4449

Total Operating Days =8225

* Does not include contracts for data or vessel lease ($30.4M)

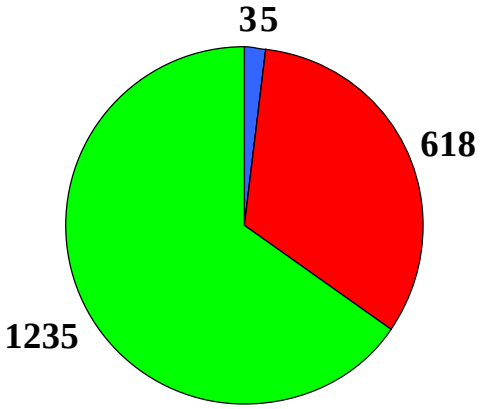
FY 2003 Planned Aircraft Hours

Aircraft Services-Funded Flight Hours



Flight Hours Requested = 2431

Other NOAA Funded Flight Hours



Total = 1888

Estimated Charter = 1375

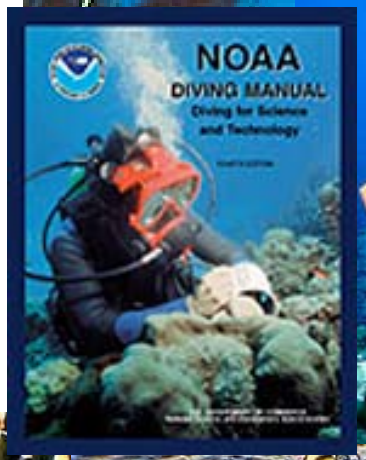
NOAA Aircraft Total = 4319

Total Flight Hours = 5694

NOAA Diving Program

- **Over 300 Divers, largest of any civilian Federal Agency**
- **Supports NWS, NMFS, OAR and NOS and training for other agencies**
- **10,000+ dives per year with outstanding safety record**
- **NOAA Diving Center Provides**
  - **Diving Training Program**
  - **NOAA Diving Safety Board**
  - **Diving Medical Board**
  - **Diving Technical Advisory Committee**
  - **Standardized Equipment Program**
  - **NOAA Diving Manual**

Topside" Newsletter



NOAA Corps Commissioned Officers

- Trained as engineers and scientists in NOAA program disciplines
- Provide a highly flexible and mobile operational component of support to NOAA programs
- Assigned throughout NOAA in management, scientific, and operational positions

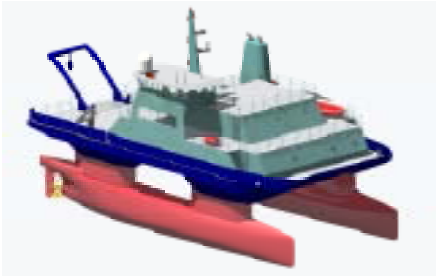
Major Projects Underway

Conversion of the YTT for coastal oceanographic work - replaces FERREL

Reactivation of the charting ship FAIRWEATHER for Alaska surveys

Conversion of the ADVENTUROUS for fisheries work in Hawaiian waters - replaces TOWNSEND CROMWELL

Conversion of the VINDICATOR for work in Hawaii



SWATH to Replace RUDE

Major Projects Underway

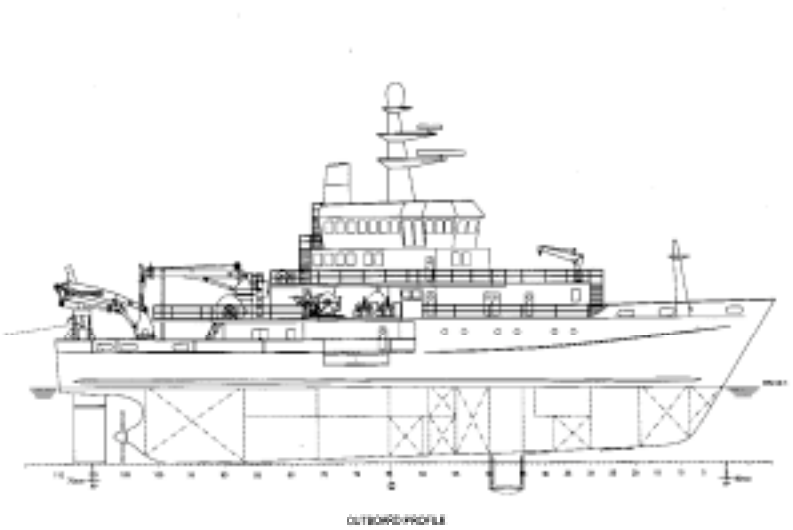
ALBATROSS IV Repairs

GORDON GUNTER Upgrades

Hydrographic Equipment Upgrades

WP-3D Standard Depot Level Maintenance

New Fisheries Research Vessels



- **NOAA's fisheries research vessels are old and reliability is decreasing; major repairs will be conducted to keep reliability up within budget constraints.**

- **Key features required in new ships include acoustic quieting to meet international standards, laboratory and berthing space, simultaneous environmental and fisheries data collection capability, trawling, and hydro-acoustic systems**

- **Funds for first new ship in NOAA's FY 2000/2001 budget; a competitive construction contract for first ship and three option ships was awarded in January 2001. Builder performing detailed design; 36 month design/construction period.**

New Fisheries Research Vessel

Status of FRV #1 Construction

- **Halter Marine is still under Chapter 11; reorganization plan filed with court**
- **Functional design progress has been good with construction start for FRV #1 scheduled for mid April**
- **Delivery scheduled for Jan 2004; delay likely**

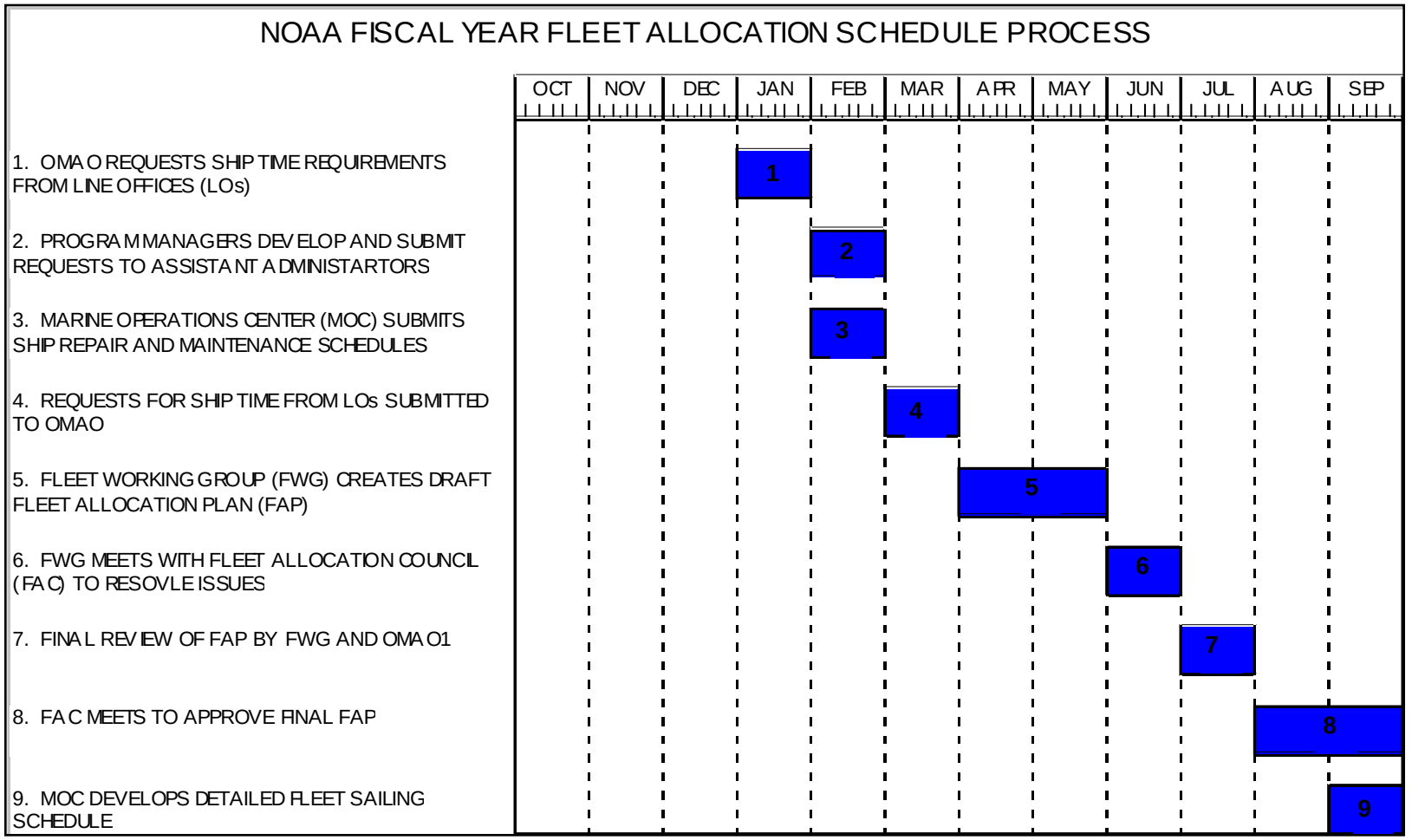
- **FRV #2 replaces the ALBATROSS IV**
- **Modifications to basic design are minimal and include laboratory spaces**
- **Two years of calibration are planned starting in FY 2006**

Challenges

- Recruiting and retaining skilled employees

- Vessel Shoreside Support Facilities:
  - Kodiak, Alaska (pictured)
  - Ketchikan, Alaska
  - Hawaii ship base

Fleet Allocation Process



Oceanographic & Atmospheric Research

- Effects of aerosols on climate
- Air sea interaction studies
- Cloud - radiation interaction
- Satellite ground truth
- Data for El Nino predictions

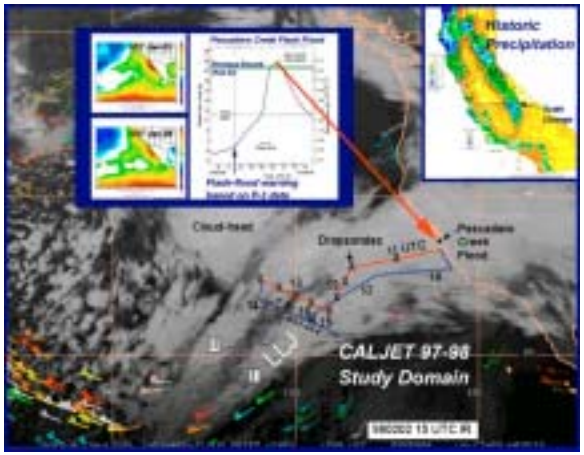
- Remotely operated vehicle support
- Fisheries oceanography
- Tsunami warning system support
- Carbon Dioxide time series data
- Hydrothermal vent studies

Coastal Monitoring and Research

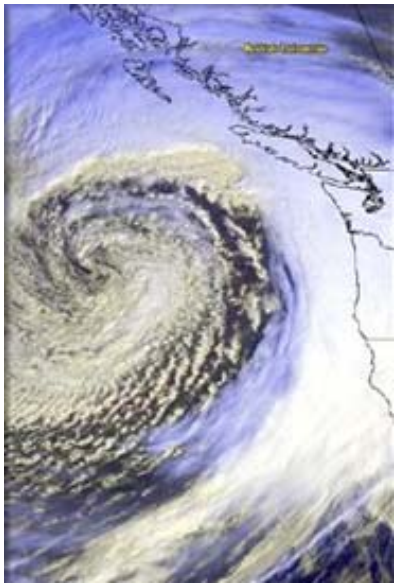
- Sustainable Seas Expedition
- Marine Sanctuary and Coastal Habitat Studies
- Bottom Topography
- Sediment Studies
- Diver and Submersible Support
- Biomass Studies
- Water Column Studies
- Buoy Operations

Hurricane & Atmospheric Research

- Hurricane intensity
- Hurricane track and landfall predictions
- Winter storm intensity and tracks
- Atmospheric pollutant studies
- Cloud physics
- Ocean surface winds
- Solar radiation studies
- Upper air turbulence studies



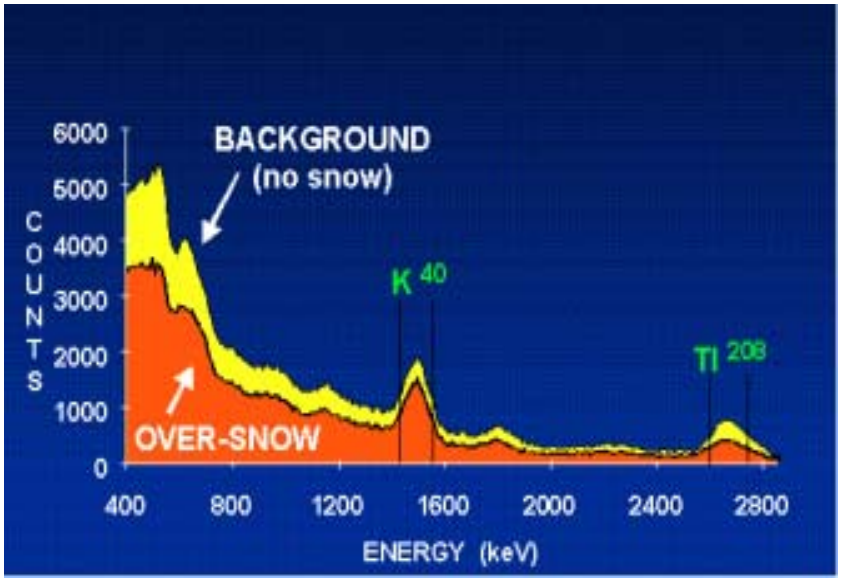
GULFSTREAM G-IV



WP-3D ORION

Snow Survey and River Forecast

Snow survey in western and upper mid-western United States



Turbo Commander

Ship Mapping and Charting

- Nautical chart data
- Obstructions to navigation
- Bathymetry
- Sanctuary habitat mapping
- Coral reef mapping

Critical Underkeel Clearance Issues require accurate surveys!

RUDE

RAINIER

WHITING

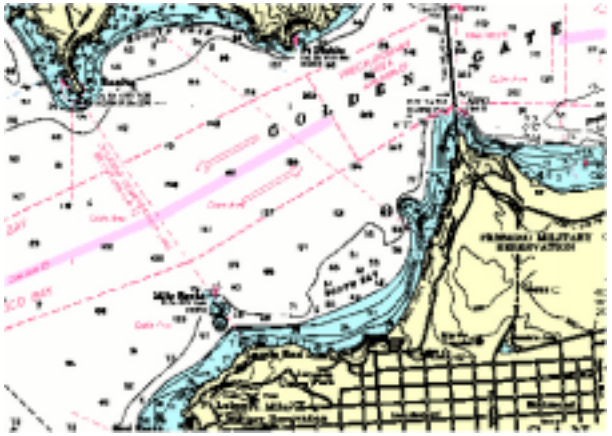
Aircraft Mapping and Charting

Shrike

Twin Otter

- Shoreline mapping
- Coastal damage assessments
- Coral Reef, kelp bed, and algal bloom mapping
- Coastal erosion
- Port and harbor updates
- Wetlands surveys

Citation



Fisheries Research Ships

ALBATROSS IV

JOHN N. COBB

GORDON GUNTER

TOWNSEND CROMWELL

DELAWARE II

MCARTHUR

OREGON II

DAVID STARR JORDAN

Eastern Tropical Pacific Dolphin Stock Assessment

NOAA Ship DAVID STARR JORDAN

MD500 Helicopter N59RF

Fisheries and Marine Mammal Research Aircraft

MD500

LAKE AMPHIBIAN

TWIN OTTER

SHRIKE

INFORMATION

- **OMAO Home Page**
  - **http://www.omao.noaa.gov**
- **Marine Operations Center**
  - **http://www.moc.noaa.gov**
- **Aircraft Operations Center**
  - **http://www.hurricanehunters.noaa.gov**
- **Commissioned Personnel Center**
  - **http://www.noaacorps.noaa.gov**

- **Teacher at Sea Home Page**
  - **http://www.tas.noaa.gov/**
- **Internet at Sea**
  - **http://rho.pmel.noaa.gov/atlasrt/kaimi.html**